

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of :

Appl. No.10/625,149

: Confirm. No. 8274

H. Downman McCarty, II

Brooke Schumm III

Peter Popper, Applicants

: Examiner: O. Flores Sanchez

Filed: July 23, 2003

: Group Art Unit 3724

**For: AN ANTI-SPALLING COMBINATION ON AN IMPACT TOOL  
WITH AN IMPROVED HOLDING SYSTEM**

Honorable Commissioner of Patents and Trademarks  
Mail Stop Patent Application, P.O. Box 1450  
Alexandria, VA 22313-1450

**CONTINUATION AND PRIORITY DATA**

Continuation in part of PCT/US02/23448 and entry into the national stage of PCT/US02/23448,  
continuation in part of U.S. provisional applications 60/307,198 filed on July 23, 2001, and  
60/356,804 filed on February 13, 2002

**NOTICE OF EXHIBIT TO DECLARATION of JAMES L. GLANCEY  
IN FURTHER SUPPORT OF APPLICANTS' RESPONSE TO OFFICE ACTION**

Filed contemporaneously and an exhibit to the Declaration of James L. Glancey,

Associate Professor, University of Delaware is the attached curriculum vitae. It is filed  
separately to stay beneath the EFS file size limit.

Respectfully,

/s/ /Brooke Schumm III /

Brooke Schumm III

Patent Bar Registration No. 34,926

Daneker, McIntire et al

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Baltimore, MD 21201

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Attorney for Applicants

I certify I caused the above to be filed electronically in the USPTO this 30<sup>th</sup> day of March, 2009.

/s//Brooke Schumm III/

Brooke Schumm III

**JAMES L. GLANCEY  
CURRICULUM VITAE**

(INCLUDES INFORMATION ONLY SINCE LAST PROMOTION IN JULY, 1997)

**REGISTERED PROFESSIONAL ENGINEER (MECHANICAL): DELAWARE REG. NO. 11032**

**EDUCATION**

- Ph.D.           University of California, Davis           1991
- M.S.           University of California, Davis           1987
- B.S.           University of Delaware               1985

**PROFESSIONAL EXPERIENCE**

- Associate Professor, Mechanical Engineering, University of Delaware           9/97 - present
- Associate Professor, Bioresources Engineering, University of Delaware       7/97 - present
- Assistant Professor, Bioresources Engineering, University of Delaware       1/91 - 6/97
- Principle, Mechanical Design and Forensic Analysis LLC, Blackbird, DE       6/99 - present

**OTHER APPOINTMENTS**

- Faculty Member, Center for Biomedical Engineering Research, Univ. of Delaware   9/03 - present
- Affiliate Faculty, Center for Composite Materials, Univ. of Delaware           7/03 - present
- Engineer, Cooperative Extension Service, Univ. of Delaware                   7/03 - present

**RECOGNITION AND AWARDS**

- Associate Editor, American Society of Ag and Biological Engineers, 2003-present.
- Outstanding Reviewer Award, American Society of Ag and Biological Engineers, 2007.
- Nominated for Excellence in Academic Advising, Univ. of Delaware, 2006.
- Inducted into the University of Delaware's Mentors' Circle. 2001.
- Dean's Merit Award, Univ. of Delaware, 2001.
- Nominated for Excellence in Teaching Award, Univ. of Delaware College of Engineering, 2000.
- North Central Campus Senior-Faculty Recognition Award, Univ. of Delaware, 2000.
- Excellence in Academic Advising, Univ. of Delaware. 1996-97.
- Society of Automotive Engineers Recognition Award. 1997, 2004 Off-Highway and Powerplant Exposition.
- Awards Received by Student Advisees:
  - ASME Student Design Competition, 2008 First Place Award Tied for 1<sup>st</sup> place. ((Sean Collins, Sarah Mabel, Dan Shannon, and Doug Erikson). \$1,750.
  - ASME Student Design Competition, 2008 First Place Award – Tied for 1<sup>st</sup> place. (Jesse Dibelka, Julianne Twomey, and Mark Steimer). \$1,750.
  - Sigma Xi Undergraduate Research Thesis Award (Janelle Konchar)
  - Society for the Advancement of Materials and Processing (SAMPE) National Research Award (Michael Fuqua, 2<sup>nd</sup> Place Nationally)
  - Honors Degree with Distinction Thesis (Kerrie Smith, Richard Herseim, Scott Kasprzak, Michael Fuqua)
  - Degree with Distinction Thesis (Janelle Konchar, Dan Brisach, Matt Griffith)
  - Honors Program Undergraduate Research Summer Fellowship (Scott Kasprzak, Michael Fuqua)
  - Hayward Fellowship for Undergraduate Research (Kerrie Smith, Richard Herseim, Scott Kasprzak)
  - Nowinski Award for Undergraduate Research in Mechanical Engineering (Rich Herseim)
  - Science and Engineering Scholars (Richard Herseim, Ian Cosden, Michael Fuqua, Janelle Konchar, Jessie Krisher, John Nasr, Mathew Griffith, Stephan Petfield)
  - Delaware Water Resources Center Summer Internship (Kerrie Smith, Mathew King)
  - Undergraduate Research S&E Awards (Daniel Brisach (2), Matthew Griffith (3), John Nasr, Scott Kasprzak (2), Janelle Konchar (3), Jesse, Krisher, Mike Fuqua (2), Dan Muhlenforth, James Moore, Jennifer Lawrence, Dominic Schiavoni, Eric Busby, Richard Herseim (2), Gwen Thorsen (2), Dustin Fryberger, Kerrie Smith (2), Dawn Cintavey, Tony Nasr, Annie Tseng, Mike Fyock, Dan Meckley, Chad Stover, Dan Hoffstetter)
  - Colonial Academic Alliance Undergraduate Research Symposium Invited Presenter (Janelle Konchar, Kerrie Smith)

- Center for Biomedical Engineering Research Symposium Presenters (Justin Alms, Jennifer Lawrence, James Moore, Dominic Schiavoni, Dan Muhlenforth, Jonathan Fitzgibbons, Barbara Tuesday, Rich Herseim, Janelle Konchar, Jessie Krisher)
- Center for Composite Materials Undergraduate Research Fellowship (Michael Fuqua, Matt Griffith, Steve Petfield)
- Outstanding Senior Researcher, Center for Composite Materials (Scott Kasprzak, Daniel Brisach)
- Center for Composite Material Graduate Achievement Award (Justin Alms, co-advised w/ S. Advani)
- College of Engineering Graduate Student Laird Fellowship (Jingbo Wang, co-advised w/ J. Vinson)
- Center for Composite Materials R.L. McCullough Scholars Award (Justin Alms, co-advised with S. Advani)

## PROFESSIONAL SOCIETIES

- American Society of Mechanical Engineers
- American Society of Ag & Biological Engineers
- Society for the Advancement of Material and Process Engineering
- Society of Automotive Engineers
- Delaware Association of Professional Engineers

## TEACHING

### COURSES TAUGHT AT U OF D

- EGTE 125/167 – Freshman Seminar (96F, 97F, 98F)
- EGTE 209 – Computer-Aided Drafting (06S, 08S, 09S)
- EGTE 435 – Machinery Design (96F, 98S, 01S, 03S, 05S, 07S)
- EGTE 450 - Practicum in Industry (06S)
- EGTE 467 – Issues in Production Agriculture (02S)
- EGTE 366/466 – Undergraduate Independent Study (01F, 02S, 03F, 04S, 06F, 07W, 07S)
- AGE 666 – Graduate Independent Study (97S)
- MEEG 202 – Computer-Aided-Engineering Design (05S)
- MEEG 304 – Machine Design: Elements (99S, 00S)
- MEEG 401 – Senior Design (99F/S, 00F-05F, 07F-08F)
- MEEG 445 – Senior Research (00-06)
- MEEG 366/466 – Independent Study (06S)
- MEEG 467 – Special Topics in Engineering Design (03S, 04S)
- MEEG 666 – Graduate Research Study (08F)
- MEEG 866 – Graduate Research (02F, 03S, 03F, 04S)
- UNIV 111 – First Year Experience Freshman Seminar (08F)
- UNIV 401/402 – Senior Thesis, University-Wide Instructor of Record (07F, 08S)
- UNIV 401/402 –Senior Thesis Advisor (02F, 03S, 03F, 04S, 04F, 05S, 05F, 06S, 06F, 07S)

### INVITED LECTURES

- MEEG 653, Manufacturing Processes. Two Lectures: Computer-Aided Engineering and Manufacturing; Automation for Manufacturing. (2003, 2004, 2005, 2006, 2007, 2008)
- MEEG 304, Machine Design. Developing Design Packages for Communicating Engineering Solutions. (2008).
- EGTE 440, Plant Layout. Basics of Vibration and Noise-Related Industrial Hygiene and Engineering Controls to Reduce Exposures and Injuries. (2007).
- UNIV 401, Senior Thesis. Developing an Effective Research Presentation: Fall Meeting of the Senior Thesis Candidates. (2004, 2005, 2006)
- UNIV 401, Senior Thesis. Using and Not Abusing Technologies to Deliver Research Presentations (a.k.a. Avoiding Death by PowerPoint). (2005, 2006)
- PLSC 302, Vegetable Science. Precision Ag for Horticultural Crops (2000).
- ANFS 421, Poultry Production. Pollution Prevention Technologies for the Delmarva Poultry Industry. (1999).
- PLSC 302, Vegetable Science. Mechanization & Engineering in Production Horticulture (1999).
- EGTE 443, Instrumentation. Basics of GPS and DGPS. (1998).

### GRADUATE AND UNDERGRADUATE THESIS

- Ph. D. Students:
  - First Advisor:

- Justin Alms, Ph.D. in Mechanical Engineering (with Suresh Advani, 2006-present)  
Thesis: Closed Loop Control Strategies with VARTM for Manufacturing Large-Scale Composites
- Committee Member:
  - Swapnil Garge, Ph.D. in Chemical Engineering (2007)
  - Kalyan Mankala, Ph.D. in Mechanical Engineering (2006)
  - Jeff Lawrence, Ph.D. in Mechanical Engineering (2005)
  - Jie Sheng, Ph.D. in Mechanical Engineering (2005)
  - Chris Foster, Ph.D. in Mechanical Engineering (2005)
  - Xiangyu Wang, Ph.D. in Mechanical Engineering (2004)
  - Luis Crespo, Ph.D. in Mechanical Engineering (2002)
- M.S. Students:
  - First Advisor:
    - Ajit R Nalla, Master in Mechanical Engineering (2006)  
Thesis: Modeling and Adaptive Control of Vacuum Assisted Resin Transfer Molding Systems with Segmented Injection and Vacuum Lines.
    - Jingbo Wang, Master in Mechanical Engineering (with J. Vinson, 2002)  
Thesis: Transverse Shear and Non-Linear Deformation Effects on the Physical Properties of Sandwich and Laminate Composite Plates.
    - Manu Krishnan, Master in Mechanical Engineering (with J. Sun, 2000)  
Thesis: Adaptive Control Strategies for Precision Agriculture Machines.
  - Committee Member:
    - Darren Brown, Master of Mechanical Engineering (2008)
    - Prabhas Bhat, Master of Mechanical Engineering (2007)
    - John Fader, Master of Mechanical Engineering (2006)
    - Thomas Shipman, Master of Mechanical Engineering (2006)
    - Stephanie Frangakis, Master of Mechanical Engineering (2005)
    - Sean McIntosh, Master of Mechanical Engineering (2005)
    - Yeliz Karakaya, Master of Mechanical Engineering (2005)
    - Scott Lynch, Master of Environmental and Energy Policy (2004)
    - James Arters, Master of Mechanical Engineering (2004)
    - Rajkiran Madangopal, Master of Mechanical Engineering (2004)
    - Mathieu Devillard, Master of Mechanical Engineering (2003)
    - Mark Lynch, Master in Food & Resource Economics (1998)
- Undergraduate Degree with Distinction and Honors Degree with Distinction Thesis
  - First Advisor:
    - Daniel Brisach, Degree with Distinction in Mechanical Engineering (2006-07).  
Thesis: Vibration transmission measurements in the hand and arm from impacting components.
    - Matt Griffith, Degree with Distinction in Mechanical Engineering (2006-07).  
Thesis: High strain rate characteristics of mineral reinforced polymers.
    - Janelle Konchar, Degree with Distinction in Mechanical Engineering (2005-06)  
Thesis: Modeling & testing of a new polymer-based impact tool design to reduce biomechanical injuries.
    - Michael Fuqua, Honors Degree with Distinction in Mechanical Engineering (2005-06)  
Thesis: A Port Injection System and Controller for VARTM.
    - Scott Kasprzak, Honors Degree with Distinction in Mechanical Engineering (2004-05)  
Thesis: VARTM Flow Modification with Machine Vision and Robotic Control.
    - Richard Herseim, Honors Degree with Distinction in Mechanical Engineering (2003-04)  
Thesis: A Full Scale Apparatus for Measuring the Forces Exerted on the Human Femur During Falls.
    - Kerrie Smith, Honors Degree with Distinction in Mechanical Engineering (2002-03)  
Thesis: An Autonomous Whole Water Column Environmental Monitoring System with Telemetry.
  - Second Advisor:
 

○ John Eisenbrey	(Mechanical Engineering)	2004-05
○ Michael Kutzer	(Mechanical Engineering)	2004-05

- Thomas Shipman (Mechanical Engineering) 2003-04
- Kristin Huesmann (Mechanical Engineering) 2002-03
- Karin Wood (Bioresources Engineering) 2002-03
- Ryan Jost (Food & Resource Economics) 2000-01
- Third Reader:
  - Jeffrey Bosco (Chemistry & Biochemistry) 2008-09
  - Michael Daugherty (Exercise Science) 2008-09
  - Sarah Flynn (Physical Therapy) 2008-09
  - Emily Gardinier (Physical Therapy) 2008-09
  - Katherine Monahan (Exercise Science) 2008-09
  - Jeffrey Rockwell (Civil Engineering) 2008-09
  - Jason Schoenfeld (Physical Therapy) 2008-09
  - Adam W. Blomberg (Physics & Astronomy) 2007-08
  - Zachary Pollock Fry (Computer & Info. Science) 2007-08
  - Andrew Scott Gearhart (Computer & Info. Science) 2007-08
  - Hailey Ann Guerriero (Physics & Astronomy) 2007-08
  - Joshua Kirby (Computer & Info. Science) 2007-08
  - Donald Andre Scott (Computer & Info. Science) 2007-08
  - Steven Anton (Physics & Astronomy) 2006-07
  - Todd Molnar (Mathematical Sciences) 2006-07
  - Daniel Osborne (Physics & Astronomy) 2006-07
  - Ming-Jay Shiao (Electrical Engineering) 2006
  - Patrick Collar (Computer & Info. Science) 2005-06
  - Janine Janoski (Mathematical Sciences) 2005-06
  - Kathryn Sharp (Mathematical Sciences) 2005-06
  - Zachary Loman (Electrical Engineering) 2005-06
  - Peter Steijn (Computer & Info. Science) 2005-06
  - Ming-Jay Shiao (Electrical Engineering) 2005-06
  - Anteneh Anteneh (Computer & Info. Science) 2004-05
  - Michael Brennan (Computer & Info. Science) 2004-05
  - Lewis Fishgold (Computer & Info. Science) 2004-05
  - Ki-Yong Kim (Computer & Info. Science) 2004-05
  - Brendan Farmer (Mathematical Sciences) 2004-05
  - Michael Lowinger (Chemical Engineering) 2003-04
  - Richard Lunt (Chemical Engineering) 2003-04

#### VISITING SCHOLARS AND STUDENTS

- Laurent Garnier, 4<sup>th</sup> Year Mechanical Engineering, *Ecole des Mines de Douai*, Douai, France. Evaluation of VARTM control strategies to improve resin filling characteristics. (co-advised w/Dr. Suresh Advani). 2007.
- Aude Catry, 4<sup>th</sup> Year Mechanical Engineering, *Ecole des Mines de Douai*, Douai, France. Evaluation of VARTM control strategies to improve resin filling characteristics. (co-advised w/Dr. Suresh Advani). 2007.
- Benoit Lelievre. M.S., Department of Mechanical Engineering, *Universite de Bretagne Sud*, Lorient, France. Measurement and Control of the Resin Flow in Composite Pre-forms with Flow Disturbances and Variable Permeability. 2003.
- Yuen-Yong Leong, M.S., Electrical Engineering, *Imperial College London*, South Kensington campus, London, England. System Identification and Controller Design for a Hydrostatic Drive New Holland Windrower. 2002.
- Dr. Zhang Zong, Ph. D. Associate Professor, Department of Mechanical Engineering, *Beijing University of Technology*, Beijing, China. Modeling and Experimental Evaluation of the Wear in a Miniature Vane Pump Used for the Evaluation of Hydraulic Fluid Performance. 1999-2001 (w/ Dr. Michael Keefe).

#### SPECIAL EDUCATIONAL PROGRAMS AND ACTIVITIES

- *Co-Advisor*, Solar Decathlon Competition. Nationwide design competition to develop and operate an 800 ft<sup>2</sup> solar powered house – the team consisted of three faculty advisors, 30 students and several technical consultants. The U of D house, along with the 9 other houses from universities in the US and Puerto Rico, was built and operated on the National Mall in Washington, D.C. for a 10 day period in October, 2002. Over 90,000

visitors toured the site, and the U of D house had over 40 local industrial sponsors. Faculty Advisors: Drs. Lian Ping Wang, Ajay Prasad, and James Glancey.

- *Advisor*, Travel Abroad Program to California/Mexico Winter Session 2002. Co-Sponsored by the Depts. of Plant and Soil Sciences & Bioresources Engineering. Faculty Directors: Ed Kee and James Glancey. Cancelled due to 9/11.
- *Project Advisor*, High School Senior Research Project
  - Derrek Jones. 2004-05. Performance of a non-contact temperature sensor for avian egg embryo temperature measurement. Senior Research Project for the *Charter School of Wilmington*.
  - Phillip Franklin. 2004-05. Biomechanics of a human climbing a fiberglass step ladder. Senior Research Project for the *Charter School of Wilmington*.
- *Project Advisor*, High School Sophomore Science Fair Project
  - Amee Raval. 2006-07. Measuring the Heating Value from Several Different Bio-Diesel and E-Diesel Fuels. Sophomore Science Fair for the *Charter School of Wilmington*, Wilmington, DE.
  - Sam Nobles, 2005-06. Testing of Ethanol-Based and Soyoil-Based Diesel Fuels in Commercial and Industrial Engines. Sophomore Science Fair for the *Charter School of Wilmington*.
  - Shane Furn. 2005-06. Particulate Emission Measurements from Several Biofuels in Commercial and Industrial Engines. Sophomore Science Fair for the *Charter School of Wilmington*.
- *Advisor*, High School Summer Research Internship
  - Erin McCaul. 2005. Estimating physical properties required for computing the forces on the upper femur during falls. *St. Marks High School*, Wilmington, DE.
  - *Coach*, Science Olympiad. Lectures and Demonstrations on Simple Machines. Mario Musumeci and Adam Smith. (2008).
- *Presenter and Judge*, New Castle County Annual Science Fair and American Society of Mechanical Engineers Award Presenter. (2006, 2008). Stanton, DE.
- *Presenter*, High School Student Groups:
  - Engineering as a Professional Career Choice. 2008. *Middletown High School Career Fair*, Middletown, DE. (as part of the Delaware Association of Professional Engineers booth).
  - Engineering as a Profession. 2007. *St. Marks High School Career Fair*, Wilmington, DE.
  - Biomechanics: Engineering for (and of) Humans. 2004. *Outreach seminar for the Resources for Successful Engineers (RISE) program*, Students from the Philadelphia School District, Newark, DE.
  - Who's Really Protecting Me? Engineers Who Design and Develop Products! 2003. *Outreach seminar for the Resources for Successful Engineers (RISE) program*, Students from the Philadelphia School District, Newark, DE.

#### UNDERGRADUATE STUDENT PROJECTS ADVISED FOR CREDIT (INDEPENDENT STUDY OR HONORS DEGREE REQUIREMENT), 3 CREDITS UNLESS OTHERWISE NOTED

1. Daniel Brisach. 2008-09. Development of PWM charging strategies for ultracapacitors used on mobile equipment for energy storage. Sponsored by Case New Holland.
2. Chris Uthgenannt. 2009. Development of a flexible curtain for disc mowers to reduce knock down force. Sponsored by Case New Holland. (6 credits)
3. Kasey Gust. 2008. Installation of a gas flow regulator feed system for automated flow rate setting (Sponsored by Air Liquide in fulfillment of her Honors Capstone Requirement).
4. Ronit Lili. 2008. Kinematic analysis of a composite marine seat structure for military applications. Sponsored by Revenge Composites (in fulfillment of his Honors Capstone Requirement).
5. Mark Steimer. 2008. Control circuit simulation and prototyping of vehicle energy storage systems using ultracapacitors. Sponsored by Case New Holland
6. Michael Brill. 2008. Design and prototyping of a novel sanitary swatter (US Patent No. 6,957,510). Sponsored by Laura Simon, Esquire, Wilmington, DE.
7. Sean Collins and Doug Ericson. 2008. Modeling and experimental validation of an on-board hydraulic bale weighing system for round balers. Sponsored by Case New Holland. (3 credits each)
8. Dan Pron. 2007. Confined compression characteristics of a mineral reinforced polymer. Sponsored by Hard Cap, LLC.
9. Daniel Gempeshaw. 2007. Kinematic analysis of a composite marine seat structure for military applications. Sponsored by Revenge Composites (in fulfillment of his Honors Capstone Requirement).
10. Tom Coombes. 2007. Design and Development of a Hand-Crank Dynamometer as a Hands-on Museum Activity. Sponsored by the Delaware Ag Museum. (4 credit)

11. Dan Pron. 2006-07. Testing of Polymers for Impact Resistance on a Hammer Face. Sponsored by Hard Cap, LLC.
12. Jesse Krisher. 2006. Development of an ALGOR Finite Element Model for the Prediction of Femoral Fractures from Human Falls. Sponsored by the Dupont Co.
13. Beth Miller, Erik Pearson, and James Woodhouse. 2006. Embedded Controller Development and Vehicle Testing of a Drive-by-Wire Propulsion System for a Windrower. 2006. Sponsored by CNH America, LLC. (3 credits each)
14. Matt Griffith. 2006. High Strain Rate Instron Testing of Reinforced Polymer Inserts for Power Tools. Sponsored by Hard Cap, LLC.
15. John Armstrong and Greg Stewart. 2005. Design and Testing of a Mechanical Harvesting System for Indoor, Closed System Tilapia Production. Sponsored by Blair View Aquaculture Farm. (3 credits each).
16. Julia Levinson. 2005. Automated Measurement of Laminate Bond Strength for Substrates Bonded to Teflon Membranes. Sponsored by W.L. Gore and Associates.
17. Craig Livingston. 2005. Computer-Aided-Drafting Fundamentals (1 credit).
18. Barry Levinson. 2005. Solid Modeling with Mechanical Desktop (1 credit).
19. Mark Deaver. 2004-05. Parametric Modeling and Finite Element Analysis of Disposable Testing Components for Measuring Laminate Bond Strength. Sponsored by W.L. Gore and Associates.
20. Gwen Thorsen. 2003-04. Software Development and Testing for the Automatic Transmission of Data via a Cellular Modem. Sponsored by the Delaware Department of Natural Resources and Environmental Control. (6 credits)
21. Eric Busby. 2004. Development of a Remote Controlled Drip Tape Cutter. Sponsored by Busby Farms.
22. Jennifer Lawrence and James Moore. 2004. Development of a Test Stand for the Vibration Analysis of Power Tools. Sponsored by Baltimore Tool Works, Inc. (3 credits each)
23. Dominic Schiavoni. 2004. Design of a Drop Hammer for Constant Energy Impact Testing. Sponsored by Baltimore Tool Works, Inc.
24. Dan Muhlenforth. 2004. Design and Testing of Low Vibration Accessories for Hand-Struck Tools. Sponsored by Baltimore Tool Works, Inc.
25. Derrick Dickerson. 2004. Development of an Automated Test Device for Evaluating the Wear Characteristics of Poultry Nipple Drinkers. Sponsored by the Delaware Cooperative Extension Service. (co-advised w/ Gary Van Wicklen).
26. Eric Busby. 2004. Development and testing of a device for accelerated life testing of an *Air Pogo* toy. Sponsored by Leavis and Rests, P.C.
27. Dan Muhlenforth. 2003-04. Software and sensor arrangement for determining the frequency content of hand-mounted accelerometers. Sponsored by Baltimore Tool Works, Inc.
28. Dominic Schiavoni. 2003-04. Measurement of vibration transmitted to the hand from hand-struck and power tools. Sponsored by Baltimore Tool Works, Inc.
29. Dominic Pellegrinio. 2003. Design of a steel frame flooring system with EPS foam insulation. Sponsored by Ecothermal Panel Systems, Inc.
30. Mike Fyock and Dan Meckley. 2003. Structural analysis and hydraulic automation of a prototype kicker for round balers. Sponsored by Case New Holland, Inc. (3 credits each)
31. Annie Tseng. 2003. An automated testing machine and methodology for ceramic wafer substrates used for blood sample analysis. Sponsored by Dade Behring.
32. Matt Mitch. 2002. Development of a computer design tool for the cooling systems on skid-loaders. Sponsored by Case-New Holland, Inc.
33. Dawn Cintavey. 2002. Finite element analysis of extruded aluminum structures. Sponsored by National Forensics Engineers, Inc.
34. Mark Orgovan and Dan O'Brien. 2002. Evaluation of a Two-Piece Chisel System Designed with a High Performance Engineering Polymer. Sponsored by Baltimore Tool Works, Inc. (3 credits each)
35. Pete Truitt. 2002. Automatic Pneumatic Capping System for Containers with Dental Adhesive. Sponsored by Densply-Caulk.
36. Julian Jones and Matt Dougherty. 2002. Development of an Automated Cutter for Plastic Sleeves. Sponsored by Xymid, LLC.
37. Tony Nasr. 2002. Design of a Framing System and Fasteners for Attaching Solar Module Systems to Steel-Framed Structures including Electrical Isolation. Sponsored by the UD Solar Decathlon and AstroPower.
38. Tony Nasr. 2002-03. Ergonomic Testing of a New Hand-Struck Chisel System. Sponsored by Baltimore Tool Works, Inc.

39. Mike Vassallo. 2002. Development of High Volume Compression System for Silage Samples. Sponsored and co-advised by Dr. L. Kung.
40. Rich Herseim. 2002. Design, Analysis and Testing of Plastic Drivetrain Shields on Case-New Holland Windrower Headers. Sponsored by Case-New Holland, Inc.
41. Pete Truitt. 2002. Finite Element Analysis of the Impact of a Hammer-Tool System. Sponsored by Baltimore Tool Works, Inc.
42. Andrew Drysdale. 2002. The Current State of Photovoltaic Technology. (as part of his Honors Degree Capstone Requirement in Mechanical Engineering).
43. Doug Cook, Jeff Gordon, and Matt Dunson. 2001. Development of *AutoGap*: A Control System for the Automatic Adjustment of Windrower Roll Gap. Sponsored by Case New Holland, Inc. (3 credits each)
44. Ian Cosden. 2001. Labview Software Development and Field Testing for the Automatic Control of DC Motor Angular Displacement. Sponsored by Case-New Holland, Inc.
45. Tim Filasky. 2001-02. Design of a Precision Push Planter. Sponsored by Delaware Cooperative Extension and Rogers Seed Co.
46. Mac Cushing. 2001-03. Design of an Automatic Fabric Feed System for the Composite Center Laser Cutter. Sponsored by Cirrus Engineering.
47. Nikki Rossi. 2001. Feasibility of an On-line Degradation Sensor for Soy-based Hydraulic Fluids. Part of a project funded by Dupont. (co-advised with Mike Keefe)
48. Chad Stover. 2000. Development of Improved Vaccination System for Day-of-Age Marak's Vaccine. Sponsored by the Allen Laboratory.
49. Andy Park. 2000. Development of Teaching Modules for CAD/CAM and CNC Machining. (co-advised with Mike Keefe).
50. Matt Dunson and Yuen Yoong Leong. 2000. Demeter Project System ID and PID Controller Design. Sponsored by New Holland, N.A.
51. Matt Behr. 1999. Development of a non-invasive sensing method for the measurement of watermelon sugar content. Sponsored by Delaware Cooperative Extension.
52. Ken Miller and Rob Banks. 1998. Experimental evaluation of a subcutaneous vaccination system for day-of-age Marak's vaccine. (co-advised with M. Keefe).
53. John Filasky. 1997. Design requirements for a watermelon harvester. Sponsored by Delaware Cooperative Extension.
54. Dan Hoffstetter. 1997. Yield monitor designs for vegetable harvesters. Sponsored as part of a grant from FMC Corp.

## SCHOLARSHIP

### BOOK CHAPTERS

1. Glancey, J.L. 2008. Vacuum-Based Resin Transfer Molding Techniques for Manufacturing Composite Materials and Components. *Innovations in Materials and Manufacturing Methods*. Abingdon, Oxford, UK (in preparation).
2. Glancey, J.L. 2003. Machine Design for Vegetable Production Systems, Chapter from *The Encyclopedia of Agricultural, Food and Biological Engineering*, Marcel Dekker, New York, NY.

### REFEREED PUBLICATIONS

1. Alms, J., J. Glancey and S. Advani. 2009. Flow Modification Process for Vacuum Infusion Using Port-Based Resin Flow Control. *SAMPE Journal* (in press).
2. Glancey, J.L., J.T. Sims, and D. Snyder. 2008. Field evaluation of a mechanical topdresser for solid wastes. *Biosystems Engineering*, 99(3): 432-443.
3. Glancey, J.L., J. Hummel, A. Chirnside, S. Nobles, S. Chanpimol and A. Ravel. 2007. Bio-fuel emission measurements and potential environmental implications for the Mid-Atlantic Region. *Journal of Environmental Monitoring and Restoration*, 3: 158-166.
4. Keefe, M., J. Glancey, and N. Cloud. 2007. Assessing student team performance in industry sponsored design projects. *Transactions of the ASME, Journal of Mechanical Design*, 129(7): 692-700.
5. Brown, D., and J.L. Glancey. 2007. Theoretical and experimental analysis of a continuous blade cutter for leafy vegetables. *Transactions of the ASABE*, 50(3): 803-813.
6. Nalla, A., M. Fuqua, J.L. Glancey and B. Leleiver. 2007. A multi-segment injection line and real-time adaptive, model-based controller for vacuum assisted resin transfer molding. *Composites Part A: Applied Science and Manufacturing*, 38: 1058-1069.



7. Brisach, D., M. Griffith, J. Konchar, S. Petfield, P. Popper, and J.L. Glancey. 2007. Attenuation of impact and continuous vibration in the hand and arm. The ASME International Design Engineering Technical Conferences: The 21st Biennial Conference on Mechanical Vibration and Noise, & Applications of Vibration and Acoustics in Biomedical Engineering, Las Vegas, NV.
8. Griffith, M., D. Brisach, J. Konchar, S. Petfield, P. Popper, and J.L. Glancey. 2007. Polymer-based vibration and noise emission control characteristics for hand-struck tools. Proceedings of the ASME International Design Engineering Technical Conferences: The 19th Reliability, Stress Analysis and Failure Prevention Conference, Las Vegas, NV.
9. Glancey, J., J.T. Sims and D. Snyder. 2007. Agronomic and environmental implications of sidedressed poultry manure as a nitrogen source for crops. *Journal of Environmental Monitoring and Restoration*, 3: 206-221.
10. Krishnan, M., R. Strosser, J.L. Glancey, and J.Q. Sun. 2006. Adaptive modeling and control of a precision manure spreader. *Computers and Electronics in Ag*, 52(1-2):1-10.
11. Fuqua, M. and J.L. Glancey. 2006. A port injection process and control for improved resin delivery and flow control for VARTM. Proceedings of the 2006 ASME International Annual Meeting, Chicago, IL. IMECE2006-14422.
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25. Keefe, M., J.L. Glancey, and Z. Zhong. 2000. Performance of high oleic soybean oil-based hydraulic fluids in long-duration pump tests. *Society of Automotive Engineers Special Publication SP-136, Lubricants for Off-Highway Vehicles*.
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31. Glancey, J.L. 1997. Analysis of header loss from pod stripper combines in green peas. *J. Agri. Eng. Res.* 68: 1-10.

#### PEER-REVIEWED PUBLISHED ABSTRACTS

1. Glancey, J.L. 2009. Progress in developing a universal mechanical harvester for small greens. *HortScience* (in press).
2. Brown, D. and J.L. Glancey. 2007. Mechanical harvesting of spinach. *HortScience*, 42(3): 429-434.
3. Glancey, J.L. 2007. Yield, plant architecture, and machine harvest characteristics of several leafy greens grown for processing. *HortScience* 42(3): 429-434.
4. Glancey, J.L. 2003. Recent advances in machine harvest of fruits and vegetable: Engineering aspects of production and mechanization for fresh and processed vegetables. *HortScience*, 38(5): 800.
5. Glancey, J.L. and W.E. Kee. 2003. The U.S. Vegetable Industry Past and Future: Technical and Strategic Advances in Mechanization. *HortScience*, 38(5): 830.

#### NON-REFEREED RESEARCH PAPERS & PROCEEDINGS

1. Glancey, J.L., J.T. Sims, and D. Snyder. 2008. Field evaluation of a mechanical topdresser for solid wastes. Conference *Frontiers in Nutrient Management: Sources & Solutions in the Inland Bays Watershed*, Rehobeth, DE. (abstract only)
2. Alms, J., J. Glancey and S. Advani. 2009. Development of computer controlled flow manipulation for vacuum infusion processes. *ICCM-17 17th International Conference on Composite Materials*. Edinburgh, UK
3. Alms, J., J. Glancey and S. Advani. 2008. Vacuum induced preform relaxation (VIPR) process for resin flow control in vacuum infusion processes. *Proceedings of the American Society for Composites 23rd Technical Conference*, Memphis, TN.
4. Alms, J., J. Glancey and S. Advani. 2008. Experimental determination of permeability of woven fiber glass during the vacuum induced preform relaxation (VIPR) process. *Proceedings of the 9th International Conference on Textile Composites (TEXCOMP9)*. Newark, DE.
5. Alms, J., J. Glancey and S. Advani. 2008. Experimental validation of a port based injection methodology for vacuum infusion processes. *The 2008 Society for the Advancement of Materials and Process Engineering Symposium and Exposition*, Long Beach, CA.
6. Alms, J., J. Glancey and S. Advani. 2008. Vacuum induced preform relaxation (VIPR) process for resin flow control in vacuum infusion processes. *The 9th International Conference on Flow Processes in Composite Materials (FPCM-9)*, July 7th to 9th, Montreal, Quebec.
7. Collins, S., D. Erickson, S. Mabel, D. Shannon, K. Smith and J. Glancey. 2008. Design and prototyping of a hydraulic hose and cable organizer for mobile equipment. *The ASME International Design Engineering Technical Conferences: 5th Symposium on International Design and Design Education (DEC)*, Brooklyn, NY.
8. Dibelka, J., M. Steimer, L. Traub, J. Twomey, J. Glancey, S. Woods, S. Phillips. 2008. Design of a heat removal method for the electronics in lithium-ion cordless power tools. *The ASME International Design Engineering Technical Conferences: 5th Symposium on International Design and Design Education (DEC)*, Brooklyn, NY.
9. Glancey, J. 2008. Mechanical harvesting characteristics of several leafy greens grown for processing. *The 2008 Northeast Agricultural and Biological Engineering Conference*, Annapolis, MD.
10. Pearson, E. J. Woodhouse, B. Miller, R. Strosser and J. Glancey. 2008. Performance of a Prototype Steer-by-Wire Driving System for Self Propelled Windrowers. *The 2008 Northeast Agricultural and Biological Engineering Conference*. Annapolis, MD.
11. Stewart, S., J. Armstrong, J. Harp, D. Breakiron, M. Baker, G. Bennett, R. Jester and J. Glancey. 2008. Mechanical harvesting system for improving the ergonomics for in-door, closed system, live market tilapia production. *The 2008 Northeast Agricultural and Biological Engineering Conference*, Annapolis, MD.
12. Collins, S., D. Erickson, S. Mabel, D. Shannon, K. Smith and J. Glancey. 2008. A hydraulic hose and electrical cable organizer and support for agricultural implements. *The 2008 Northeast Agricultural and Biological Engineering Conference*, Annapolis, MD.

13. Glancey, J. 2008. Feasibility of on-site cucumber relish manufacturing from mechanically harvested culled fruit: mechanical and energy requirements. Proceedings of the 2008 ASABE International Annual Meeting. Providence, RI.
14. Fuqua, M. and J. Glancey. 2008. Resin position sensing and control during infusion of composite panels as a cost-effective alternative to metal shielding and panels on agricultural and construction equipment. Proceedings of the 2008 ASABE International Annual Meeting. Providence, RI.
15. Glancey, J., R. Gorlich, and R. Jester. 2008. Mechanically-assisted composting of fish mortalities for disabled aquaculture producers. Proceedings of the 2008 ASABE International Annual Meeting. Providence, RI.
16. Glancey, J., J. Vinson and D. Brisach. 2008. Side Rail Flexibility and the Potential for Spreader Bar Failures on Tall Step Ladders. Proceedings of the 2008 ASABE International Annual Meeting. Providence, RI.
17. Glancey, J., D. Hoffstetter, and E. Kee. 2008. Impact characteristics of pickling cucumber and their effect on mass flow rate measurement. Application of Precision Agriculture for Fruits and Vegetables, January 6th – 9th, 2008, Orlando, FL.
18. Alms, J., J. Lawrence, A. Catry, J. Glancey and S. Advani. 2007. Resin delivery and control workstation for VARTM. Proceedings of the Sixth Canadian-International Composites Conference, Winnipeg, Manitoba, Canada.
19. Konchar, J., D. Brisach, M. Griffith, J. Nasr, P. Popper, and J. Glancey. 2007. Design and testing of composite driveline components for impact tools. The 2007 Society for the Advancement of Materials and Process Engineering Symposium and Exposition, Baltimore, MD.
20. Kasprzak, S., J. Nasr, M. Fuqua, and J. Glancey. 2007. An external flow modification system for vacuum assisted resin transfer molding. The 2007 Society for the Advancement of Materials and Process Engineering Symposium and Exposition, Baltimore, MD.
21. Fuqua, M. and J.L. Glancey. 2007. The Effects of in-tool resin delivery ports on process control and molded part quality for vacuum-based composite manufacturing. Proceedings of the Greater Philadelphia AIAA/ASME 3<sup>rd</sup> Annual Aerospace & Mechanical Engineering Mini-Symposium. Plymouth Meeting, PA.
22. Nasr, J., M. Fuqua, S. Kasprzak, and J. Glancey. 2007. Modeling and experimental validation of an external flooding chamber for vacuum-based composite molding. Proceedings of the Greater Philadelphia AIAA/ASME 3<sup>rd</sup> Annual Aerospace & Mechanical Engineering Mini-Symposium. Plymouth Meeting, PA.
23. Brisach, D., M. Griffith, S. Petfield, P. Popper, and J. Glancey. 2007. Evaluation of reinforced polymer composites for engineering controls of sound and vibration. Proceedings of the Greater Philadelphia AIAA/ASME 3<sup>rd</sup> Annual Aerospace & Mechanical Engineering Mini-Symposium. Plymouth Meeting, PA.
24. Alms, J., S. Advani, and J. Glancey. 2007. Vacuum Induced Preform Relaxation (VIPR) Method for Liquid Composite Molding (LCM) Processes. Proceedings of the Greater Philadelphia AIAA/ASME 3<sup>rd</sup> Annual Aerospace & Mechanical Engineering Mini-Symposium. Plymouth Meeting, PA.
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26. Glancey, J.L., J. Hummel, S. Nobles, Shane Chanpimol. 2007. Measurement of transient smoke emissions characteristics from e-diesel and soy-diesel fuel blends in two commercial engines. Proceedings of the 2007 ASABE International Annual Meeting, Minneapolis, MN.
27. Glancey, J.L. 2007. Once-over harvesting of several leafy greens. 2007. Proceedings of the 2007 ASABE International Annual Meeting, Minneapolis, MN.
28. Brisach, D., M. Griffith, P. Popper and J. Glancey. 2007. Measurement of vibration transmission in the hand and arm from impact and continuous vibrating sources. Proceedings of the 2007 ASABE International Annual Meeting, Minneapolis, MN.
29. Glancey, J., Konchar, D. Brisach, and P. Popper. 2006. Reducing vibration-related injuries from hand and power tools. Proceedings of the 2006 National Ergonomics Conference and Exposition. Las Vegas, NV.
30. Brown, D. and J.L. Glancey. 2006. Fatigue analysis of long-span continuous band saw blades. Proceedings of the 2006 ASME International Annual Meeting, Chicago, IL. IMECE2006-14402.
31. Armstrong, J., G. Stewart, J. Harp, D. Breakiron, M. Baker, G. Bennett, R. Jester, and J. Glancey. 2006. Improving the ergonomics of harvest for in-door, closed system, live market tilapia production. ASABE Paper No. 065003. ASAE, 2959 Niles Road, St. Joseph, MI 49085-9659.
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35. Fuqua and Glancey. 2006. Modeling of vacuum assisted resin transfer with in-mold ports. Proceedings of the Greater Philadelphia AIAA/ASME 2<sup>nd</sup> Annual Aerospace & Mechanical Engineering Mini-Symposium. Plymouth Meeting, PA.
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44. Glancey, J.L., K. Carlisle, and W. Carlisle. 2005. High speed mechanical harvesting of spinach. NABEC Paper No. 05027. 2005 NABEC Annual Conference, Lewes, DE.
45. Kasprzak, S., M. Fuqua, M. Griffith, J. and J. L. Glancey. 2005. An Overview of Composite Manufacturing Processes and Applications. NABEC Paper No. 05028. 2005 NABEC Annual Conference, Lewes, DE.
46. Brown, D., D. Jones, and J.L. Glancey. 2005. Measurement of embryo temperature in incubating avian eggs. NABEC Paper No. 05P008. 2005 NABEC Conference, Lewes, DE.
47. Sims, J.T., J.L. Glancey, and D. Snyder. 2005. Field Evaluation of an Applicator for Sidedressing Row Crops with Solid Wastes. NABEC Paper No. 05P006. 2005 NABEC Conference, Lewes, DE.
48. Konchar, J., J. Glancey, P. Popper. 2005. Sound Emission Characteristics of New Hand-Struck Tools Designed with High Performance Engineering Polymers. NABEC Paper No. 05P007. 2005 NABEC Conference, Lewes, DE.
49. Glancey, J.L., G. Snyder, J. Vinson, J. Krishnan, P. Franklin. Dynamic loading of fiberglass step ladders. NABEC Paper No. Paper No. 05P005. 2005 NABEC Conference, Lewes, DE.
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51. Smith, K., G. Thorson, J.L. Glancey, and S. Huerta. 2005. Real-time surveillance of shallow depth estuaries for water quality and harmful algal blooms. ASCE Paper Number: 40763-7510. 2005 ASCE Watershed Management Conference, Williamsburg, VA.
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59. Smith, K., G. Thorson, and J. L. Glancey. 2004. Progress in developing low cost, near-real-time surveillance systems for water quality monitoring in Delaware. Paper No. 04-0051. 2004 Northeast Region Ag and Biological Engineers, State College, PA.
60. Nalla, A., B. Leleiver, and J.L. Glancey. 2004. Performance of a new VARTM resin injection line. Proceedings of the 7<sup>th</sup> International Conference on Flow Processes in Composite Materials, Newark, Delaware.
61. Nalla, A., J.L. Glancey and B. Leleiver. 2004. Theoretical and experimental evaluation of a segmented injection line for resin flow control in VARTM. Proceedings of the 7<sup>th</sup> International Conference on Flow Processes in Composite Materials, Newark, Delaware.
62. Wang, J., J.L. Glancey, and J.R. Vinson. 2002. Transverse shear deformation effects in laminated and sandwich composite panels subjected to in-plane shear. Proceedings of the ASME IMECE, New Orleans, LA.
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66. Glancey, J.L., J.K. Rosenberger, and S.S. Cloud. 1999. Measurement of embryo and air cell temperatures in incubating broiler eggs. Abstract #9938. The 10<sup>th</sup> Annual Northeast Agricultural and Biological Engineering Conference, Lancaster, PA.
67. Knowlton, S (Dupont), and J.L. Glancey. 1998. Development of a high oleic soybean oil-based hydraulic fluid. 1998. Proceedings of the 89<sup>th</sup> Annual Meeting of the American Oil Chemists Society. Chicago, IL, May 1998.
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69. Glancey, J.L., W.E. Kee, T.L. Wootten and D.W. Hofstetter. 1998. Feasibility of once-over mechanical harvest of processing squash. ASAE Paper #981093. ASAE, 2959 Niles Road, St. Joseph, MI 49085-9659.
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71. Glancey, J.L., D. Hoffstetter, W.E. Kee, T.L. Wootten, and M. Lynch. 1997. Preliminary evaluation of yield monitoring techniques for vegetables. ASAE Paper # 971060. ASAE, 2959 Niles Road, St. Joseph, MI 49085.
72. Glancey, J.L., S. Seymour, C. Bohman, R. Sheehan, and J. Posselius (New Holland N. A., Inc.) 1997. Development of a precision industrial spreader for the land application of solid wastes. ASAE Paper # 971081. ASAE, 2959 Niles Road, St. Joseph, MI 49085-9659.
73. Glancey, J.L., W.E. Kee, and T.L. Wootten. 1997. Reducing damage and improving recovery of mechanically harvested pickling cucumbers. ASAE Paper #971017. ASAE, 2959 Niles Road, St. Joseph, MI 49085-9659.
74. Glancey, J.L., W.E. Kee, T.L. Wootten. 1997. Modeling recovery of pod stripper combines used for the mechanical harvesting of processed vegetables. Proceedings of the 5<sup>th</sup> International Symposium on Fruit, Nut and Vegetable Production Engineering. Davis, CA.
75. Kee, W.E., T.L. Wootten and J.L. Glancey. 1997. Production Systems to Optimize Mechanical Harvest of Pickling Cucumbers. Proceedings of the 5<sup>th</sup> International Symposium on Fruit, Nut and Vegetable Production Engineering. Davis, CA.
76. Glancey, J.L. 1997. Yield monitoring of lima beans in pod stripper combines. Proceedings of the Biennial Meeting of the Bean Improvement Cooperative, Annapolis, MD.
77. Glancey, J.L. 1997. Yield monitoring of peas with pod stripper combines. Proceedings of the Biennial Meeting of the Pea Improvement Cooperative, Annapolis, MD.

#### NON-REFEREED TEACHING PAPERS

1. Glancey, J.L. 2006. Faculty and industry partnerships through sponsored research and design projects targeted to enhance undergraduate education. ASABE Paper No. 068022. ASAE, 2959 Niles Road, St. Joseph, MI 49085-9659.
2. Keefe, M., J.L. Glancey, and N. Cloud. 2005. A case study in assessing team-based design courses that integrate industry-sponsored projects. Paper No. IMECE2005-81756. Proceedings of the 2005 International Mechanical Engineering Congress and Exposition, Orlando, FL

#### INVITED PRESENTATIONS

1. Adjustment and operation of conditioning equipment and new technologies for increased drying rates and decreased dry matter losses. 2009. The Joint Maryland Cattlemen's Convention/Central Maryland Hay and Pasture Conference to be March 6-7, 2009, Hagerstown, MD
2. Design recommendations to improve the safety of portable, metal climbing structures. 2008. The annual meeting of the American National Standards Institute (ANSI), Subcommittee 14.2. Chicago, IL.
3. Machine design in vegetable production and harvesting: A review of 100 years of engineering innovation and design. 2007. The 2007 ASABE International Annual Meeting, Minneapolis, MN.
4. Preventing hand and arm injuries through limited exposure and new low vibration tool technology. 2007 Delaware Safety Association Annual Meeting, Ocean City, MD.
5. Reducing vibration-related injuries from hand and power tools. 2006 National Ergonomics Conference and Exposition. Las Vegas, NV.
6. Ladders – Summary of testing and forensics of failures. 2006. Consumer Union, Inc. Headquarters (Publishers of Consumer Reports Magazine). Yonkers, NY.
7. Measuring the potential for noise and vibration injuries in industrial settings. 2006 Eastern Ergonomics Conference and Exposition. Boston, MA.
8. Assessing and preventing ladder accidents. 2006 Delaware Safety Association Annual Meeting. Ocean City, MD.
9. Demonstration of a new cost effective surveillance system for Delaware water bodies. 2005. Scientific and Technical Advisory Committee, Center for the Inland Bays. College of Marine Studies, University of Delaware, Lewes, DE.
10. Automation requirements for retaining pickling cucumber production in the U.S. 2005 PPI Annual Meeting, Baltimore, MD.
11. Developments in harvesting of specialty crops. 2005 AETC Conference, Invited Session on Specialty Crops, Louisville, KY.
12. Barriers to vegetable harvest automation. 2005. AETC Conference, Invited Session on Automation, Louisville, KY.
13. Workshop on hand-arm vibration and noise: Overview of current limits and strategies for reducing working exposure and injury. 2005 Eastern Ergonomics Conference and Exposition, New York, NY.
14. Engineered human protection: An overview of research at UD. 2004. Dupont Experimental Station, Wilmington, DE.
15. Overview of modern machine designs for mechanized harvest of processing peas. The 2004 ASAE Film Forum. 2004 ASAE International Meeting, Ottawa, ON Canada.
16. Ten years of developments for mechanical harvesting pickling cucumbers. The 2004 ASAE Film Forum. 2004 ASAE International Meeting, Ottawa, ON Canada.
17. Theoretical and experimental evaluation of an adaptive controller design using off-line model-based prediction and a segmented injection line for resin flow control in VARTM. 2004. Office of Naval Research, Advanced Materials Intelligent Processing Center (AMIPC). Newark, DE.
18. Progress in developing automated equipment for the simulation of human falls. 2004. Dupont Experimental Station, Wilmington, DE.
19. Improving mold part quality through automation and control: Progress and future challenges. 2004. NSF Invited Workshop Participant: Future of Modeling in Composites Molding Processes. The National Science Foundation, June 9 and 10, 2004, Alexandria, VA.
20. Progress in spatial and temporal surveillance technology for agricultural and environmental monitoring in Delaware. 2004. Department of Geography, spring 2004 Colloquium. Newark, DE.
21. Design and development of near real time whole water column surveillance systems for Delaware estuaries. 2004. Scientific and Technical Advisory Committee, Center for the Inland Bays. College of Marine Studies, University of Delaware, Lewes, DE.



22. Engineering aspects of production and mechanization for fresh and processed vegetables. 2003. Workshop on Recent Advances in Machine Harvesting of Fruits and Vegetables. The 100th Annual International Conference of the American Society for Horticultural Sciences. Providence, Rhode Island
23. Technical and strategic advances in vegetable mechanization. 2003. Colloquium: The U.S. Vegetable Industry Past and Future: Highlighting Advances, Challenges, and Opportunities in Vegetable Crop Management. Proceeding of the 100th Annual International Conference of the American Society for Horticultural Sciences. Providence, Rhode Island (co-presenter with Ed Kee).
24. Adaptive control options for liquid composite resin injection. 2002. Office of Naval Research Meeting at the Center for Composite Materials, Newark, DE.
25. Performance of soy-based hydraulic fluids in long-term pump tests. 2001. Annual Meeting of the United Soybean Board Industrial Uses Committee. United Soybean Board, Chicago, IL (co-presenter Keefe).
26. Machine harvest: Research and field experiences on Delmarva and production systems, comparative tests of the Raven vs. the PicRyte Harvester, and improving tractor mounted harvesters. 2000. The Pickling Cucumber Improvement Committee (PCIC) Spring Meeting of the Pickle Packers International, Newark, DE. (Kee, Glancey and Adkins).
27. Current machine design research projects including harvester improvements, automated pile filing, and electronic and digital sorting of pickles. 2000. The Pickling Cucumber Improvement Committee (PCIC) Spring Meeting of the Pickle Packers International, Newark, DE. Demonstrations held on the UD campus. (Glancey and Kee).
28. Development of a precision manure spreader for improved nutrient management. 1999. Agricultural Computer Expo, Lancaster, PA.
29. Progress in developing a soyoil based hydraulic fluid. 1999. Annual Meeting of the United Soybean Board Industrial Uses Committee. United Soybean Board, Chicago, IL (co-presenter Keefe and J. Gooch (Dupont)).
30. Weld design and specifications: An engineer's perspective. 1999. Meeting of the American Welding Society, Delaware Section, Newark, DE.
31. A low volume fluid power test standard for hydraulic fluid testing. 1998. The Lubrizol Corporation, Wickliffe, OH.
32. A soyoil based hydraulic fluid: Advantages and limitations. 1998. United Soybean Board, Chicago, IL Annual Meeting of the United Soybean Board Industrial Uses Committee (co-presenter Knowlton).
33. Mechanical harvesting: Current issues and where should we go from here? 1997. 104<sup>th</sup> Pickle Packers International Annual Meeting, Las Vegas, NV. (Ed Kee gave this talk for me since I could not attend).
34. Progress in cucumber harvester research. 1997. Block and Guggenheimer Foods Inc. Annual Growers Meeting, DuPont Country Club, Seaford, DE.
35. An overview of pod stripper combine research at UD. 1997. FMC Corporate Headquarters, Chicago, IL.

#### RESEARCH PRESENTATIONS AT PROFESSIONAL MEETINGS & CONFERENCES

1. Glancey, J.L., J.T. Sims, and D. Snyder. 2009. Field evaluation of a mechanical topdresser for solid wastes. Conference Frontiers in Nutrient Management: Sources & Solutions in the Inland Bays Watershed, Rehobeth, DE. (abstract only)
2. Alms, J., J. Glancey and S. Advani. 2009. Development of computer controlled flow manipulation for vacuum infusion processes. ICCM-17 17th International Conference on Composite Materials. Edinburgh, UK
3. Glancey, J.L. 2009. Progress in developing a universal mechanical harvester for small greens. Northeast Region of the American Society for Horticultural Science, Newark, DE.
4. Alms, J., J. Glancey and S. Advani. 2008. Vacuum induced preform relaxation (VIPR) process for resin flow control in vacuum infusion processes. American Society for Composites, 23rd Technical Conference, Memphis, TN.
5. Alms, J., J. Glancey and S. Advani. 2008. Experimental determination of permeability of woven fiber glass during the vacuum induced preform relaxation (VIPR) process. Proceedings of the 9th International Conference on Textile Composites (TEXCOMP9). Newark, DE.
6. Alms, J., J. Glancey and S. Advani. 2008. Experimental validation of a port based injection methodology for vacuum infusion processes. The 2008 Society for the Advancement of Materials and Process Engineering Symposium and Exposition, Long Beach, CA.
7. Alms, J., J. Glancey and S. Advani. 2008. Vacuum induced preform relaxation (VIPR) process for resin flow control in vacuum infusion processes. The 9th International Conference on Flow Processes in Composite Materials (FPCM-9), July 7th to 9th, Montreal, Quebec.

8. Collins, S., D. Erickson, S. Mabel, D. Shannon, K. Smith and J. Glancey. 2008. Design and prototyping of a hydraulic hose and cable organizer for mobile equipment. The ASME International Design Engineering Technical Conferences: 5th Symposium on International Design and Design Education (DEC), Brooklyn, NY.
9. Dibelka, J., M. Steimer, L. Traub, J. Twomey, S. Woods, S. Phillips, and J. Glancey. 2008. Design of a heat removal method for the electronics in lithium-ion cordless power tools. The ASME International Design Engineering Technical Conferences: 5th Symposium on International Design and Design Education (DEC), Brooklyn, NY.
10. Glancey, J. 2008. Mechanical harvesting characteristics of several leafy greens grown for processing. The 2008 Northeast Agricultural and Biological Engineering Conference, Annapolis, MD.
11. Pearson, E. J. Woodhouse, B. Miller, R. Strosser and J. Glancey. 2008. Performance of a Prototype Steer-by-Wire Driving System for Self Propelled Windrowers . The 2008 Northeast Agricultural and Biological Engineering Conference, Annapolis, MD.
12. Stewart, S., J. Armstrong, J. Harp, D. Breakiron, M. Baker, G. Bennett, R. Jester and J. Glancey. 2008. Mechanical harvesting system for improving the ergonomics for in-door, closed system, live market tilapia production. The 2008 Northeast Agricultural and Biological Engineering Conference, Annapolis, MD.
13. Collins, S., D. Erickson, S. Mabel, D. Shannon, K. Smith and J. Glancey. 2008. A hydraulic hose and electrical cable organizer and support for agricultural implements. The 2008 Northeast Agricultural and Biological Engineering Conference, Annapolis, MD.
14. Glancey, J. 2008. Feasibility of on-site cucumber relish manufacturing from mechanically harvested culled fruit: mechanical and energy requirements. Proceedings of the 2008 ASABE International Annual Meeting. Providence, RI.
15. Glancey, J., R. Gorlich, and R. Jester. 2008. Mechanically-assisted composting of fish mortalities for disabled aquaculture producers. Proceedings of the 2008 ASABE International Annual Meeting. Providence, RI.
16. Fuqua, M. and J. Glancey. 2008. Resin position sensing and control during infusion of composite panels as a cost-effective alternative to metal shielding and panels on agricultural and construction equipment. Proceedings of the 2008 ASABE International Annual Meeting. Providence, RI.
17. Glancey, J., J. Vinson and D. Brisach. 2008. Side Rail Flexibility and the Potential for Spreader Bar Failures on Tall Step Ladders. Proceedings of the 2008 ASABE International Annual Meeting. Providence, RI.
18. Alms, J., J. Glancey and S. Advani. 2008. Vacuum induced preform relaxation (VIPR) process for resin flow control in vacuum infusion processes. The 9th International Conference on Flow Processes in Composite Materials (FPCM-9) will be held from July 7th to 9th 2008, in Montreal, Quebec..
19. Glancey, J, D. Hoffstetter, and E. Kee. 2008. Impact mechanics of pickling cucumber as a basis for mass flow measurement on mechanical harvesters. Application of Precision Agriculture for Fruits and Vegetables, January 6th – 9th, 2008, Orlando, FL.
20. Alms, J., J. Lawrence, A. Catry, J. Glancey and S. Advani. 2007. Resin delivery and control workstation for VARTM. The Sixth Canadian-International Composites Conference, Winnipeg, Manitoba, Canada.
21. Brisach, D., M. Griffith, J. Konchar, S. Petfield, P. Popper, and J.L. Glancey. 2007. Attenuation of impact and continuous vibration in the hand and arm. The ASME International Design Engineering Technical Conferences: The 21st Biennial Conference on Mechanical Vibration and Noise, & Applications of Vibration and Acoustics in Biomedical Engineering. Las Vegas, NV.
22. Griffith, M., D. Brisach, J. Konchar, S. Petfield, P. Popper, and J.L. Glancey. 2007. Polymer-based vibration and noise emission control characteristics for hand-struck tools. The ASME International Design Engineering Technical Conferences: The 19th Reliability, Stress Analysis and Failure Prevention Conference, Las Vegas, NV.
23. Stewart, S., J. Armstrong, R. Jester and J. Glancey. 2007. A bulk mechanical harvester for indoor, closed system tilapia production. The 4th National Aquaculture Extension Conference, Cincinnati, Ohio.
24. Brisach, D., M. Griffith, J. Konchar, P. Popper, and J. Glancey. 2007. Polymer composite-based noise emission controls for power and hand-struck impact tools. The 2007 American Industrial Hygiene Conference & Exposition, Philadelphia, PA.
25. Griffith, M., D. Brisach, J. Konchar, J. Nasr, P. Popper, and J. Glancey. 2007. Reducing the potential for vibration-related injuries from hand and power tools. The 2007 American Industrial Hygiene Conference & Exposition, Philadelphia, PA.
26. Glancey, J.L., J. Hummel, A. Chirnside, S. Nobles, S. Chanpimol and A. Ravel. 2007. Bio-fuel emission measurements and potential environmental implications for the Mid-Atlantic Region. National Conference on Agriculture & Natural Resource Conservation and Management. Dover, DE.



27. Smith, K., J. Glancey, S. Huerta, E. Humphries and R. Tyler. 2007. Cost effective, real-time surveillance of shallow depth estuaries for water quality monitoring and harmful algal bloom detection. National Conference on Agriculture & Natural Resource Conservation and Management. Dover, DE.
28. Glancey, J., J.T. Sims and D. Snyder. 2007. Field evaluation of new sidedressing technology for side dressing solid wastes. National Conference on Agriculture & Natural Resource Conservation and Management. Dover, DE.
29. Fuqua, M. and J.L. Glancey. 2007. The Effects of in-tool resin delivery ports on process control and molded part quality for vacuum-based composite manufacturing. The Greater Philadelphia AIAA/ASME 3<sup>rd</sup> Annual Aerospace & Mechanical Engineering Mini-Symposium. Plymouth Meeting, PA.
30. Nasr, J., M. Fuqua, S. Kasprzak, and J. Glancey. 2007. Modeling and experimental validation of an external flooding chamber for vacuum-based composite molding. The Greater Philadelphia AIAA/ASME 3<sup>rd</sup> Annual Aerospace & Mechanical Engineering Mini-Symposium. Plymouth Meeting, PA.
31. Brisach, D., M. Griffith, S. Petfield, P. Popper, and J. Glancey. 2007. Evaluation of reinforced polymer composites for engineering controls of sound and vibration. The Greater Philadelphia AIAA/ASME 3<sup>rd</sup> Annual Aerospace & Mechanical Engineering Mini-Symposium. Plymouth Meeting, PA.
32. Alms, J., S. Advani, and J. Glancey. 2007. Vacuum Induced Preform Relaxation (VIPR) Method for Liquid Composite Molding (LCM) Processes. The Greater Philadelphia AIAA/ASME 3<sup>rd</sup> Annual Aerospace & Mechanical Engineering Mini-Symposium. Plymouth Meeting, PA.
33. Konchar, J., D. Brisach, M. Griffith, J. Nasr, P. Popper, and J. Glancey. 2007. Design and testing of composite driveline components for impact tools. The 2007 Society for the Advancement of Materials and Process Engineering Symposium and Exposition, Baltimore, MD.
34. Kasprzak, S., J. Nasr, M. Fuqua, and J. Glancey. 2007. An external flow modification system for vacuum assisted resin transfer molding. The 2007 Society for the Advancement of Materials and Process Engineering Symposium and Exposition, Baltimore, MD.
35. Fuqua, M. and J. Glancey. 2007. Design and performance of a closed loop control, port-based resin Delivery System for Vacuum-Assisted Resin Transfer Molding. The 2007 Society for the Advancement of materials and process engineering symposium and exposition, Baltimore, MD.
36. Glancey, J.L., J. Hummel, S. Nobles, S. Chanpimol, and A. Raval. 2007. Measurement of transient smoke emissions characteristics from e-diesel and soy-diesel fuel blends in two commercial engines. The 2007 ASABE International Annual Meeting, Minncapolis, MN.
37. Glancey, J.L. 2007. Once-over harvesting of several leafy greens. The 2007 ASABE International Annual Meeting, Minncapolis, MN.
38. Brisach, D., M. Griffith, P. Popper and J. Glancey. 2007. Measurement of vibration transmission in the hand and arm from impact and continuous vibrating sources. The 2007 ASABE International Annual Meeting, Minncapolis, MN.
39. Glancey, J.L., and D. Brown. 2007. Mechanical harvesting of spinach. Northeast Region of the American Society for Horticultural Science, University of Maryland, College Park, MD.
40. Glancey, J.L. 2007. Yield, plant architecture, and machine harvest characteristics of several leafy greens grown for processing. Northeast Region of the American Society for Horticultural Science, University of Maryland, College Park, MD.
41. Fuqua, M. and J.L. Glancey. 2006. A port injection process for improved resin delivery and flow control in vacuum-assisted resin transfer molded composites. 2006 ASME International Annual Meeting, Chicago, IL.
42. Konchar, J., P. M. Griffith, P. Popper, and J.L. Glancey. 2006. Modeling and testing of a new polymer-based impact tool design to reduce biomechanical injuries. 2006 ASME International Annual Meeting, Chicago, IL.
43. Kasprzak, S., M. Fuqua., J. Nasr, and J.L. Glancey. 2006. A robotic system for real-time resin flow modification during vacuum-assisted resin transfer molding of composite materials. 2006 ASME International Annual Meeting, Chicago, IL.
44. Brown, D. and J.L. Glancey. 2006. Fatigue and stability analysis of long-span continuous band saw blades. 2006 ASME International Annual Meeting, Chicago, IL.
45. Griffith, M., J. Nasr, P. Popper, and J.L. Glancey. 2006. A reinforced polymer hammer cap for eliminating metal-to-metal contact and reducing hand-transmitted vibration. 2006 ASABE International Annual Meeting, Portland, OR.
46. Brown, D., and J.L. Glancey. 2006. Fatigue analysis and testing of a continuous blade band-type cutter for leafy vegetables. 2006 ASABE International Annual Meeting, Portland, OR.
47. Armstrong, J., G. Stewart, J. Harp, D. Breakiron, M. Baker, G. Bennett, R. Jester, and J. Glancey. 2006. Improving the Ergonomics of Harvest for Pond Raised, Live Market Tilapia. 2006 ASABE International Annual Meeting, Portland, OR.

48. Fuqua, M. and J.L. Glancey. 2006. Development of a port injection process for vacuum assisted resin transfer molding. The 2006 Meeting of the Society for the Advancement of Materials and Processes (SAMPE), Long Beach, CA.
49. Fuqua and Glancey. 2006. Modeling of vacuum assisted resin transfer with in-mold ports. The Greater Philadelphia AIAA/ASME 2<sup>nd</sup> Annual Aerospace & Mechanical Engineering Mini-Symposium. Plymouth Meeting, PA.
50. Nasr, J., S. Kasprzak, and J. Glancey. 2006. External modification of VARTM flow with a rigid external chamber. The Greater Philadelphia AIAA/ASME 2<sup>nd</sup> Annual Aerospace & Mechanical Engineering Mini-Symposium. Plymouth Meeting, PA.
51. Kasprzak, S., M. Fuqua, J. Nasr, and J.L. Glancey. 2006. A real-time resin flow modification robot for vacuum-assisted resin transfer molding of composite materials. The Greater Philadelphia AIAA/ASME 2<sup>nd</sup> Annual Aerospace & Mechanical Engineering Mini-Symposium. Plymouth Meeting, PA.
52. Nalla, A. and J. Glancey. 2006. Adaptive, model-based control for resin transfer molding. The Greater Philadelphia AIAA/ASME 2<sup>nd</sup> Annual Aerospace & Mechanical Engineering Mini-Symposium. Plymouth Meeting, PA.
53. Konchar, J. and J. Glancey. 2006. Molding and testing of composite-based impact tool designs to reduced biomechanical injuries. The 3<sup>rd</sup> Annual Center for Biomedical Engineering Research Symposium, Newark, DE.
54. Nalla, A. and J.L. Glancey. 2005. Closed loop control of resin flow in VARTM using a multi-segment injection line and real-time adaptive, model-based control. The 2005 ASME International Mechanical Engineering Congress and R&D Expo, Orlando, FL.
55. Stewart, S., J. Armstrong, J. Harp, D. Breakiron, M. Baker, G. Bennett, R. Jester and J. Glancey. 2005. Mechanical Harvesting Aids for Indoor, Closed System Tilapia Production. 2005 National Agrability Conference, Burlington, VT.
56. Glancey, J.L. 2005. Design and performance of a hydro-unloading system for machine harvested vegetables. 2005 ASAE International Annual Meeting, Orlando, Florida.
57. Glancey, J.L., J. R. Vinson, and G. A. Snyder. 2005. Assessing ladder accidents. 2005 ASAE International Annual Meeting, Orlando, Florida.
58. Glancey, J.L., P. Popper, and J. Konchar. 2005. Ergonomic benefits of polymer capped chisels. 2005 ASAE International Annual Meeting, Orlando, Florida.
59. Glancey, J.L., K. Carlisle, and W. Carlisle. 2005. High speed mechanical harvesting of spinach. 2005 NABEC Conference, Lewes, DE.
60. Kasprzak, S., M. Fuqua, M. Griffith, J. Nasr, and J. L. Glancey. 2005. An overview of composite manufacturing processes and applications. 2005 NABEC Conference, Lewes, DE.
61. Meckley, D., K. Smith, E. Priepke, and J. Glancey. 2005. A hydraulic powered bale kicker for large round balers. 2005 NABEC Conference, Lewes, DE.
62. Dickerson, D., R. Benetiz, M. Baker, G. VanWicklen and J.L. Glancey. 2005. Automated testing of poultry nipple drinkers. 2005 NABEC Conference, Lewes, DE.
63. Brown, D., D. Jones, and J.L. Glancey. 2005. Measurement of embryo temperature in incubating avian eggs. 2005 NABEC Conference, Lewes, DE.
64. Herseim, R., K. Comer, T. Stiefvater, and J. Glancey. Structural analysis and testing of injected molded plastic drive train shields for self-propelled mower conditioners. 2005 NABEC Conference, Lewes, DE.
65. Sims, J.T., J.L. Glancey, and D. Snyder. 2005. Field Evaluation of an Applicator for Sidedressing Row crops with solid wastes. 2005 NABEC Conference, Lewes, DE.
66. Konchar, J., J. Glancey, P. Popper. 2005. Sound emission characteristics of new hand-struck tools Designed with High Performance Engineering Polymers. 2005 NABEC Conference, Lewes, DE.
67. Glancey, J.L., G. Snyder, J. Vinson, J. Krishnan, P. Franklin. Dynamic loading of fiberglass step ladders. 2005 NABEC Conference, Lewes, DE.
68. Glancey, J.L., R. Strosser, I. Cosden, M. Dunson, J. Gordon, and D. Cook. 2005. Automatic adjustment and control of the conditioning roll gap on mower-conditioners. 2005 NABEC Conference, Lewes, DE.
69. Lynch, S., W. F. Ritter, and J. Glancey. 2005. Potential economic impacts of the biodiesel industry in Delaware. 2005 NABEC Conference, Lewes, DE.
70. Smith, K., G. Thorson, J.L. Glancey, and S. Huerta. 2005. Real-Time Surveillance of Shallow Depth Estuaries for Water Quality and Harmful Algal Blooms. 2005 ASCE Watershed Management Conference, Williamsburg, VA.
71. Konchar, J. and J. L. Glancey. 2005. Strategies for reducing hearing loss in industrial workers. 2<sup>nd</sup> Annual Center for Biomedical Engineering Research Symposium, Newark, DE.

72. Krisher, J. and J.L. Glancey. 2005. Modeling the impact of human falls. 2<sup>nd</sup> Annual Center for Biomedical Engineering Research Symposium, Newark, DE.
73. Glancey, J. L., R. Strosser, I. Cosden, J. Gordon, M. Dunson, and D. Cook. 2004. A system for the automatic adjustment and control of the conditioning roll gap on mower-conditioners. 2004 Society of Automotive Engineers Commercial Vehicle Engineering Congress, Advances in Off-Road Vehicle Electronics. Chicago, IL.
74. Vinson, J., J. L. Glancey, and G. A. Snyder. 2004. Analysis, Design and Optimization of High Performance Composite Sandwich Water Skis. The 2004 ASME International Mechanical Engineering Congress and R&D Expo, Los Angeles, CA. (presented by J. Vinson).
75. Smith, K. and J. L. Glancey. 2004. Design and testing of a low-cost whole water column, near real-time surveillance device for shallow depth estuaries. 2004 ASAE International Meeting, Ottawa, ON Canada.
76. Glancey, J.L., W.E. Kee, and T.L. Wootten. 2004. Effects of plant architecture on the mechanical recovery of bush-type vegetable crops. 2004 ASAE International Meeting, Ottawa, ON Canada.
77. Glancey, J.L. and T. Nasr. 2004. Measurement of transmitted vibration in tools designed using engineering polymers. 2004 ASAE International Meeting, Ottawa, ON.
78. Herseim, R., J.L. Glancey, P. Popper, W. Walker, K. Ranjan, and J. Trctacosta (Dupont, Co.). 2004. A device to simulate the mechanics of human falls. 2004 ASAE International Meeting, Ottawa, ON Canada.
79. Herseim, R., J. Moore, and J. L. Glancey. 2004. An Instrumented Device for Measuring the Dynamics of Human Falls. 2004 Northeast Region Ag and Biological Engineers, State College, PA.
80. Smith, K., G. Thorson, and J. L. Glancey. 2004. Progress in developing low cost, near-real-time surveillance systems for water quality monitoring in Delaware. 2004 Northeast Region Ag and Biological Engineers, State College, PA.
81. Nalla, A., J.L. Glancey and B. Leleiver. 2004. Theoretical and experimental evaluation of a segmented injection line for resin flow control in VARTM. The 7<sup>th</sup> International Conference on Flow Processes in Composite Materials, Newark, Delaware, USA, 7 ~ 9 July.
82. Nalla, A., B. Leleiver, and J.L. Glancey. 2004. Design and Performance of a New VARTM Resin Injection Line. The 7<sup>th</sup> International Conference on Flow Processes in Composite Materials, Newark, Delaware, USA, 7 ~ 9 July, 2004.
83. Moore, J., J. Lawrence, and J.L. Glancey. 2004. A test stand and standard testing methodology for measuring the hand-arm vibration characteristics of power tools. 2004 U of D Center for Biomedical Engineering Research Symposium, Newark, DE.
84. Muhlenforth, D., D. Schiavoni, and J. L. Glancey. 2004. Spectral analysis of new, low vibration hand-struck tool designs. 2004 U of D Center for Biomedical Engineering Research Symposium, Newark, DE.
85. Herseim, R. and J. L. Glancey. 2004. The mechanics of human falls. 1<sup>st</sup> Annual Center for Biomedical Engineering Research Symposium, Newark, DE.
86. Taday, B., J. Fitzgibbons, S. Davidson, and J. L. Glancey. 2004. Design requirements for an automated measurement system for the evaluation of progress during hand and finger physical therapy. 2004 U of D Center for Biomedical Engineering Research Symposium, Newark, DE.
87. Humphries, E. (DNREC), et. al. (DNREC presenter on behalf of all U of D and DNREC researchers). 2003. State of Delaware 2003 Harmful Algae Bloom Initiative- Summary of Current Research and Partners. 2<sup>nd</sup> Symposium on Harmful Marine Algae in the U.S., Woods Hole, Massachusetts.
88. Glancey, J.L., G.A. Snyder (National Forensic Engineers, Inc.), and J.R. Vinson. 2003. Experimental Evaluation of the Structural Characteristics of Extruded Aluminum Stepladders. The ASME International Design Engineering Technical Conferences: 17th Reliability, Stress Analysis and Failure Prevention Conference, Chicago, Illinois.
89. Snyder, G.A. (National Forensic Engineers, Inc.), J.L. Glancey, and J.R. Vinson. 2003. Failure Analysis of Stepladders Manufactured from Extruded Aluminum. The 2003 ASME International Mechanical Engineering Congress and R&D Expo, Washington, D.C.
90. Glancey, J.L., P. Popper, M. Mitch, P. Truitt, T. Nasr, M. Orgovan, J. Stevens. 2003. A New Cyclic Impact Device and Standard Testing Methodology for Hand Struck Tools. The 2003 ASME International Mechanical Engineering Congress and R&D Expo, Washington, D.C.
91. Glancey, J.L., P. Popper, T. Nasr, P. Truitt, M. Orgovan, D. O'Brian. 2003. Design and Performance of Hand-Struck Impact Tools Using High Performance Polymers. The 2003 ASME International Annual Meeting, Washington, D.C.
92. Wang, J., J.L. Glancey, and J.R. Vinson. 2002. Transverse shear deformation effects in laminated and sandwich composite panels subjected to in-plane shear. ASME IMECE, New Orleans, LA.

93. Wang, J., J.R. Vinson, and J.L. Glancey. 2002. Geometric nonlinear deformation effects in composite sandwich plates subject to in-plane shear loads ASME IMECE, New Orleans, LA.
94. Glancey, J. L. 2001. Digital Signal Processing of the Storage Bin Mass on Mobile Equipment for the Prediction of Crop Mass Flow Rate and Yield. The 2001 ASAE International Annual Meeting, Sacramento, CA.
95. Keefe, M., J.L. Glancey, and Z. Zhong. 2000. Performance of High Oleic Soybean Oil-Based Hydraulic Fluids in Long-Duration Pump Tests. Society of Automotive Engineers Congress and Exposition.
96. Krishnan, M., R. Strosser, J.L. Glancey and J.Q. Sun. 2000. Adaptive Modeling and Control of Precision Agricultural Machines. Society of Automotive Engineers Congress and Exposition.
97. Glancey, J.L., S. Knowlton, E.R. Benson. 1999. Development of a High Oleic Soybean Oil-Based Hydraulic Fluid. SAE Congress and Exposition.
98. Glancey, J.L., J.K. Rosenberger, and S.S. Cloud. 1999. Measurement of Embryo and Air Cell Temperatures in Incubating Broiler Eggs. Abstract #9938. The 10<sup>th</sup> Annual Northeast Agricultural and Biological Engineering Conference, Lancaster, PA.
99. Knowlton, S (Dupont), and J.L. Glancey. 1998. Development of a High Oleic Soybean Oil-Based Hydraulic Fluid. 1998. The 89<sup>th</sup> Annual Meeting of the American Oil Chemists Society. Chicago, IL, May 1998.
100. Glancey, J.L., S. Knowlton(Dupont), and E. Benson. 1998. Development of a High Oleic Soybean Oil-Based Hydraulic Fluid. 1998. The 1997 Society of Automotive Engineers Congress and Exposition.
101. Glancey, J.L., D.W. Hofstetter, W.E. Kee and T.L. Wootten. 1998. Yield and soil property variations in processed vegetable production on the Delmarva Peninsula. ASAE Annual Meeting.
102. Glancey, J.L., W.E. Kee, T.L. Wootten and D.W. Hofstetter. 1998. Feasibility of once-over mechanical harvest of processing squash. ASAE Annual Meeting.
103. Glancey, J.L., D. Hofstetter, W.E. Kee, T.L. Wootten, and M. Lynch. 1997. Preliminary Evaluation of Yield Monitoring Techniques for Vegetables. 1997 ASAE International Annual Meeting, Minneapolis, MN.
104. Glancey, J.L., S. Scymour, C. Bohman, R. Sheehan, and J. Posselius (New Holland, Inc.). 1997. Development of a Precision Industrial Spreader for the Land Application of Solid Wastes. 1997 ASAE International Annual Meeting, Minneapolis, MN.
105. Glancey, J.L., W.E. Kee, and T.L. Wootten. 1997. Reducing Damage and Improving Recovery of Mechanically Harvested Pickling Cucumbers. 1997 ASAE International Annual Meeting, Minneapolis, MN.
106. Glancey, J.L., W.E. Kee, T.L. Wootten. 1997. Modeling Recovery of Pod Stripper Combines Used for the Mechanical Harvesting of Processed Vegetables. The 5<sup>th</sup> International Symposium on Fruit, Nut and Vegetable Production Engineering. Davis, CA.
107. Kee, W.E., T.L. Wootten and J.L. Glancey. 1997. Production Systems to Optimize Mechanical Harvest of Pickling Cucumbers. The 5<sup>th</sup> International Symposium on Fruit, Nut and Vegetable Production Engineering. Davis, CA.
108. Glancey, J.L. 1997. Yield monitoring techniques for lima beans harvested with pod stripper combines. The Biennial Meeting of the Bean Improvement Cooperative, Annapolis, MD.
109. Glancey, J.L. 1997. Yield monitoring of peas with pod stripper combines. The Biennial Meeting of the Pea Improvement Cooperative, Annapolis, MD.

#### TEACHING PRESENTATIONS AT PROFESSIONAL MEETINGS & CONFERENCES

1. Glancey, J.L. 2006. Faculty and industry partnerships through sponsored research and design projects targeted to enhance undergraduate education. The 2006 ASABE International Annual Meeting, Seattle, WA.
2. Keefe, M., J.L. Glancey, and N. Cloud. 2005. A case study in assessing team-based design courses that integrate industry-sponsored projects. The 2005 International Mechanical Engineering Congress and Exposition, Orlando, FL.

#### FUNDED RESEARCH PROJECTS

1. Advanced Materials Intelligent Processing-Phase VI. Gillespie, Advani, Weile, Glancey, and Panchapakesan. Office of Naval Research. 2003-04. \$1,025,000.
2. Development of Near Real Time Whole Water Column Surveillance Technology for Shallow Depth Estuaries. Delaware Department of Natural Resources and Environmental Control, and The Center for the Inland Bays - \$30,500, and CANR Research Match - \$29,500.
3. Advanced Materials Intelligent Processing-Phase V. Gillespie, Advani, Weile, Glancey, and Panchapakesan. Office of Naval Research. 2003-04. \$1,300,000.
4. Development of Hip-Impact Simulation Device. 2003- present. DuPont, Inc. \$22,000.

5. Improving Hand and Power Impact Tool Performance with Engineering Polymers. 2003-04. Hard Hat, LCC. \$9,000.
6. Feasibility of automation for medical sensor manufacturing inspections. 2003. Dade Behring, Glasgow, DE. \$5,000.
7. Propulsion Control for the New Holland Power Units. 2002-03. New Holland, NA, New Holland, PA. \$10,000. (with J.Q. Sun).
8. Improving Performance of Commercial Avian Incubators through Innovative Measurement and Control of Embryo Temperature. 2002-04. US Poultry and Egg Association. \$48,000.
9. Advanced Materials Intelligent Processing- Phase IV. 2002-03. Gillespie, Advani, Weile, Glancey, and Panchapakesan. Office of Naval Research. \$1,300,000.
10. Design of a Solar House for the Solar Decathlon Competition. 2001. US Dept. of Energy (co-investigator w/ LP Wang and AJ Prasad). \$5,000.
11. Adaptive Controls for New Holland Demeter Machines. 2000-2002. CNH Global - Haytools \$20,000. (with J.Q. Sun).
12. Chemical Analysis of Used High Oleic Soybean Hydraulic Fluid. 2001. DuPont. \$20,000 (with Keefe).
13. Preliminary Control, Analysis and Design of New Holland Demeter Machines. 2000. CNH Global - Haytools \$8,000 (Co-investigator w/ Jian Sun).
14. Gift from Pickle Packers International. 1999. \$5,000. (Kee and Glancey).
15. Testing Soybean-Based Hydraulic Fluids. 1999-2001. The United Soybean Board \$25,000. DRP \$25,000. (Joint project with DuPont, Keefe and Szeri).
16. Noise Reduction on the New Holland Skid Loader. 1999. New Holland, N.A., Inc. \$20,000 (2<sup>nd</sup> investigator with Jian Sun).
17. Demonstration of Improved Configurations for Cucumbers Harvesters. 1998-99. Delaware Vegetable Growers Check-Off. \$22,000 and DRP \$22,000.
18. Calibration of a Microwave Yield Sensor. 1999. New Holland N.A., Inc. \$6,000.
19. Development of a Phosphorous-Index for the Management of Fertilizer and Poultry Manure P. 1999-2001. \$50,000 (DNREC, the State of Maryland). (J.T. Sims, Principle Investigator).
20. Development of a High Oleic Soybean Oil-Based Hydraulic Fluid. 1997-1999. DuPont: \$45,000, DRP: \$32,000
21. Development of a Precision Industrial Spreader. 1997-98. DNREC: \$39,500, New Holland, N.A., Inc.: \$49,000.
22. Mechanical Harvester Improvement Program. 1997-2001. Pickle Packers International, Inc. \$20,000. (with Ed Kee).

#### INTELLECTUAL PROPERTY

- Patents and Patent Applications Under Review
  - Apparatus and Method for Preform Relaxation and Flow Control in Liquid Composite Molding Processes. U.S. Patent No. 61/088,444.
  - Snap-off Blade Knife with Safety Stop. U.S. Patent No. 61/083,529.
  - A Composite Impact Tool Cap for Reduced Spalling, Vibration, Noise Emission, and Biomechanical Stress U.S. Patent No. 60/766315.
  - Vacuum Assisted Resin Transfer Molding Techniques with Flood Flow Chamber for Composite Material Manufacturing. U.S. Patent No. 11/458122.
  - Hammer Composite Cap for Improved Safety and Reduced Hand and Arm Vibration Injury. U.S. Patent No. 60/767289.
  - An Automatic Control System for Off-Road Equipment. U.S. Patent Number 5,784,871.
- Additional Invention Disclosures
  - A Low Volume Testing Device to Evaluate Hydraulic Fluid Performance. U.S. Patent Application Serial No. 09/256,060.
  - A System for the Direct, Continuous Measurement of the Mass Flow Rate of Bulk Materials (Provisional Patent).
  - A Yield Monitoring System for Bulk Loading Materials. (Provisional Patent).
  - A High Oleic Soybean Oil-Based Biodegradable, Non-Toxic Hydraulic Fluid. (Provisional Patent with DuPont).
  - An Applicator for Metering Bulk Solid Wastes and Compost in Rows. (with New Holland, Inc. N.A.).

## PROFESSIONAL CONSULTING

- Friday, Porta, Cox, and Ward, LLC. Pittsburgh, PA. Analysis of a horizontal mixing mill safety shutdown system. (2009).
- John Roberts, Esq., Ball, Hulbert and Roberts. Analysis of a ladder failure. Pasadena, CA (2008-present).
- The Dalton Law Firm, Wilmington, DE. Structural analysis and property testing of aluminum step ladder (2007-08).
- Gregory Hopper Esq., Salisbury, Clements, Bekman, Marder & Adkins, LLC. Analysis of a ladder failure. Baltimore, MD. (2007-present).
- O'Malley & Langan, P.C., Scranton, PA. Failure analysis of a steel ladder failure and accident. (2006)
- Craig D. Brown, Esq., Foote, Meyers, Mielke & Flowers, Geneva, Illinois. Analysis of a ladder failure (2006-08).
- Stambaugh Law, York, PA. Analysis and testing of a composite cut-off wheel for abrasive metal cutting (2006-present).
- Consumer Union, Yonkers, NY. An assessment of commercially available vibrating exercise machines. (2006-07).
- The Walker Law Group, Clearwater, FL., Extension ladder failure (2006-present).
- Richard South, Esq., Attorney at Law, Austin TX., Extension ladder failure. (2006-present).
- Cohen, Placitella & Roth, P.C., Philadelphia, PA. Analysis of a snap blade knife failure. (2006-present).
- Welebir & McCune, A professional law corporation, Redlands, California. Failure analysis of a fiberglass step ladder. (2006-08).
- Mary Buonanno, Attorney-at-Law, Takoma Park, MD. Failure analysis of a composite extension ladder siderail. (2006-present).
- Danny Henderson, Esq., Peters, Murdaugh, Parker, Eltzroth & Detrick Law Offices, Hampton, SC. Failure analysis of an aluminum step stool. (2006-present)
- Cohen, Placitella & Roth, P.C., Philadelphia, PA. Preliminary analysis of a window failure. (2006-present).
- Cirrus Engineering, Delaware Technology Park, Newark, DE. Measurement of cutting force dynamics for several PTFE coated microtome histologist blades. (2006-present).
- Stambaugh Law, York, PA. Evaluation of the safety shutdown system on a concrete power trowel (2006).
- Stambaugh Law, York, PA. Structural analysis and testing of an extension ladder. (2006).
- Stambaugh Law, York, PA. Analysis of a forklift brake failure. (2006).
- Edgar Snyder and Associates, Pittsburgh, PA. Analysis and testing of the structural failure of a polyethylene molded chair. (2006).
- Edgar Snyder and Associates, Pittsburgh, PA. Analysis of the structural failure of a composite bike fork. (2006).
- O'Malley & Langan, P.C., Scranton, PA. Failure analysis of a step stool accident. (2006)
- Ronald Owen, Attorney at Law, Jacksonville, FL. Failure analysis of a fiberglass extension ladder. (2004-present).
- O'Malley & Langan, P.C., Scranton, PA. Biomechanics of the impact of a clevis pin on the human skull and neck fitted with a hardhat. (2004-present).
- Todd S. Miller and Associates, Allentown, PA. Evaluation of a brake failure on an asphalt paver. (2004-05).
- Ferrara, Rossetti & DeVoto, P.A., Cherry Hill, PA. Preliminary failure analysis of the power train on a shaft drive motorcycle. (2004).
- O'Malley & Langan, P.C., Scranton, PA. Analysis of a motorcycle accident. (2004-present)
- Woormer and Friday Attorneys at Law, LLP, Pittsburg, PA. Analysis of a horizontal mixing mill accident. (2003-present).
- Institute for Energy Conversion, Newark, DE. Design and implementation of a self-tuning controller for a multi-chemical batch reactor with web handling. (2003-2005)
- O'Malley & Langan, P.C., Scranton, PA. Analysis of a jack-stand failure. (2003-present)
- Leavis and Rests, P.C., Boston, MA. Analysis and experimental evaluation of a defective toy. (2003-present).
- Crews and Bodiford, P.A., Orlando, FL. Failure analysis and testing of a composite sandwich structure water ski. (2003-present).
- Leavis and Rests, P.C., Boston, MA. Failure analysis of an aluminum extension ladder siderail. (2003-present).
- Gibson, Valenti & Ashley, P.A., Lake Wales, FL. Rivet pullout analysis of a fiber reinforced structure. (2003-present).

- Smith, Phillips, Mitchell and Scott, Hernando, MS. Failure analysis of an aluminum open channel. (2003-present)
- Robert M. N. Palmer, P.C., Springfield, MS. Failure analysis of an aluminum step ladder. (2003-present).
- Frankel, Cunningham, Stambaugh & Associates, York, PA. Failure of an aluminum extension ladder. (2003-present).
- Hardin, Kundla, McKeon, Poletto & Polifroni, Springfield, NJ. Fiberglass side rail structural analysis and testing for a failed Werner step ladder. (2003-present).
- Kessler, Cohen, and Roth, Inc., Philadelphia, PA. Structural analysis and testing of an aluminum folding walker. (2003).
- Cirrus Engineering, Inc., Wilmington, DE. Characterization of edge geometry for coated microtone knives; Estimation of cutting energy for apparel fabric and the design and automation of fabric cutting equipment. (2002-03).
- Hourigan, Kluger and Quinn, Kingston, PA. Failure analysis of an aluminum step ladder. (2002-03).
- Whitmyre Consulting, Newark DE. Design of, and engineering drawings for, a welded steel bracket. (2003).
- The Krasnow Law Firm, Roanoke, VA. Failure analysis of a fiber-reinforced step ladder. (2002-03).
- Hard Hat, LCC, Baltimore, MD. Design and computer-aided-drafting of a tool product line for overseas production. (2003).
- Baltimore Tool Works, Inc., Baltimore, MD. PLC programming. (2002).
- Smith, Stephens, Reed & Phillips, Inc., Pittsburgh, PA. Evaluation/testing of the safety shutdown system on a horizontal mixing mill. (2002).
- Litvin, Blumberg, Matusow, and Young, Philadelphia, PA. Evaluation/testing of the crushing potential of a vehicle power seat with position memory. (2002-03).
- Venable, Bactjer, Howard & Civiletti, LLP, Washington, D.C. Failure analysis and testing of an exercise device. (2002).
- Kessler, Cohen, and Roth, Inc., Philadelphia, PA. Failure analysis of a vending machine fan motor. (2002).
- Scanlon and Co., LLC, Akron, OH. Failure analysis of an aluminum step ladder. (2002).
- Universal Underwriters Group, Overland Park, KS. Product liability design evaluation. (2002).
- Monsanto Co., Inc., Galena, MD. Design/Development of a pneumatic conveying system for hybrid seed. (2001-02).
- Kessler, Cohen, and Roth, Inc., Philadelphia, PA. Assessment of the design, and testing of a concrete chop saw. (2001).
- Hardin, Kundla, McKeon, Poletto & Polifroni, Springfield, NJ. Failure analysis of a fiber-reinforced step ladder. (2001).
- Structural Mechanics Associates, Inc., Philadelphia, PA. Various stress analysis projects for extruded aluminum and fiber-reinforced structures. (1999-present).
- National Forensic Engineers, Inc., Pittsburgh, PA Various failure analyzes of step ladders accident cases. (1999-present).
- Monsanto Co., Inc., Galena, MD. Analysis and certification of the load capacity of a storage loft. (1999).

## SERVICE

### PROFESSIONAL & INDUSTRIAL SERVICE

- *Associate Editor*, Power and Machinery Division, American Society of Ag and Biological Engineers. Transactions of the ASABE and Applied Engineering in Agriculture. 2003-present.
- *Chairman, Vice-Chair, and Past-Chair* of PM48 – Fruit and Vegetable Production Engineering. ASAE. 1999-2005.
- *University Relations Officer*, Delaware Section of the American Society of Mechanical Engineers. 2003-present.
- *National Science Foundation Invited Workshop Participant*: Engineering Solutions for Sustainable Food and Energy Supplies in the U.S. Co-Sponsored by NSF, NASA, USDA. April 24-25, 2007, Washington, DC.
- *Scientific Committee Member*, International Symposium on the Application of Precision Agriculture for Fruits and Vegetables. 2007-08.
- *National Science Foundation Invited Workshop Presenter and Participant*: Future of Modeling in Composites Molding Processes. Co-Sponsored by NSF, DOE and APC, June 9-10, 2004, Washington, DC.
- *Member*, United Soybean Board National Technical Advisory Panel for Industrial Uses of Soybean Oil. (1999-2001).



- *Member, ASAE PM 04 - Power and Machinery Publications Committee. 2003-present.*
- *Member, ASAE PM 01/02 - Power and Machinery Executive Steering Committee. 2001-2003.*
- *ASABE Technical Committee Memberships: PM 48 – Fruit and Vegetable Production Engineering (1996-present); PM 54 – Precision Agriculture (1998-99); PM 51 – Hydraulics (1998-00); ESH 04 – Ergonomics, Safety and Health (2003-present)*
- *Member, Scientific and Technical Advisory Committee, Center for the Inland Bays, Lewes, DE 2004-present.*
- *SAE Technical Committee Memberships: Alternate Industrial Lubricants (1997-00); Fluid Power (1997-99); Farm Equipment (1997-99, 2003-present)*
- *ASME Committee Memberships: Reliability, Stress Analysis and Failure Prevention Technical Committee (RSAFP) (2003-present)*
- *Chair and/or Moderator, Sessions at Professional Meetings*
  - *2008 Conference on Application of Precision Agriculture for Fruits and Vegetables, Session on *Economics, Quality and Environmental Aspects of Precision Agriculture*.*
  - *2007 Greater Philadelphia AIAA/ASME 3rd Annual Aerospace/Mechanical Engineering Mini-Symposium, Session on *Materials*.*
  - *2007 ASABE International Annual Meeting – Session ESH-4, *Agricultural Safety and Health – Education and Intervention*.*
  - *2006 ASABE International Annual Meeting – Session ESH 216, *Advances in Safety Technology*.*
  - *2004 SAE Commercial Vehicle Engineering Congress and Exposition – *Advances in Off-Road Vehicle Electronics*.*
  - *2001 ASAE International Annual Meeting – Session I12 – *New Technology for Fruit and Vegetable Production Engineering*.*
  - *1999 SAE Off-Highway and Powerplant Congress and Exposition – *Alternative Industrial Lubricants*.*
- *Reviewer, Manuscripts*
  - *Journal of Mechanical Design, Transactions of the American Society of Mechanical Engineers (2).*
  - *Journal of Composites, Part A: Applied Science and Manufacturing (4).*
  - *Journal of Sandwich Structures and Materials (2)*
  - *Peer-Reviewed Proceedings of the Design Engineering Technical Conference (2005) – Symposium on Reliability, Stress, and Failure Prediction (American Society of Mechanical Engineers) (2).*
  - *Peer-Reviewed Proceedings of Society for the Advancement of Materials and Processes (SAMPE) (1).*
  - *Peer-Reviewed Proceedings of the American Society of Mechanical Engineers Congress (2)*
  - *Peer-Reviewed Proceedings of the Design Engineering Technical Conference (2008) – 5th Symposium on International Design and Design Education (American Society of Mechanical Engineers) (3).*
  - *Transactions of the American Society of Agricultural Engineers (5)*
  - *Computers and Electronics in Ag (1)*
  - *Journal of Agricultural Engineering Research (1)*
  - *Biosystems Engineering (2)*
  - *Applied Engineering in Agriculture (6)*
  - *Canadian Journal of Bio-Engineering (1)*
  - *SAE Technical Papers (4)*
  - *HortTechnology (ASHS) (4)*
  - *Special Issue of Soil and Tillage Research (1)*
  - *Journal of Irrigation and Drainage Engineering, American Society of Civil Engineers (1)*
  - *USDA Peer-Reviewed Publications (1)*
- *Reviewer, Books*
  - *Mechanical Engineering Design, 8<sup>th</sup> Edition. McGraw Hill, New York, NY*
  - *Solid Works Work Book for Prentice Hall, Upper Saddle River, NJ.*
  - *Practical Reliability Analysis for Prentice Hall Publishing, Upper Saddle River, NJ.*
  - *Machine Design Series, John Wiley & Sons, Inc., Hoboken, NJ*
- *Reviewer, Proposals*
  - *Kentucky Science and Engineering Foundation, R & D Excellence Funding Program (2006).*
  - *Canadian Natural Sciences and Engineering Research Council (NSERC) (2006).*
  - *The Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET) – Environmental Technology Development Grants Program (2004).*
  - *Canadian Natural Sciences and Engineering Research Council (NSERC) (2002).*
  - *National Review Panel, Small Business Innovative Research Program, Washington, D.C. (1999).*



- Small Business Innovative Research Program, Proposal Reviewer (1998, 1999, 2000, 2001, 2002, 2003, 2006, 2007, 2008).
- *Reviewer*, Papers for Northeast Agricultural and Biological Engineers (NABEC) Student Design Competition. (1992-2004, 2006-07).
- *Proctor*, Delaware Association of Professional Engineers. Fundamentals of Engineering Exam. (1998, 1999).

#### UNIVERSITY SERVICE

- *Member*, Ad Hoc committee to create a Design Institute, (2008-09).
- *Instructor of Record*, Undergraduate Senior Thesis (UNIV 401 and 402). (2007-08).
- *Member*, Senior Thesis Board, Undergraduate Research Program. (2003-present).
- *Co-Advisor*, Solar Decathlon Competition. (2001-2003).
- *Member*, Search Committee for Project Manager in the Office of the Vice Provost for Research. (1999).
- *Member*, Search Committee for Assistant Project Manager in the Office of the Vice Provost for Research. (1999).
- *Member*, Undergraduate Studies Committee, Faculty Senate (1995-97).

#### COLLEGE OF AGRICULTURE AND NATURAL RESOURCES SERVICE (CANR)

- *Member*, Search Committee for CANR Newark Farm Manager (2008-present).
- *Member*, Search Committee for the Extension Vegetable Specialist. (2007-present).
- *Member*, College Promotion and Tenure Committee (2003-2005).
- *Member*, Advisory Committee for the CANR Industrial Partnership Program. (2003, 2005-present).
- *Member*, Search Committee for Animal and Food Sciences Assistant Professor - Food Processing. (2003).
- *Member*, Search Committee for CANR Associate Dean for Education and Research. (2003).
- *Member*, Search Committee for CANR Newark Farm Manager (2002).
- *Member*, Search Committee for Animal and Food Sciences Assistant Professor - Food Engineer (2002).
- *Member*, Review Committee for the CANR Research Partnership Program. (2001, 2005).
- *Member*, College Promotion and Tenure Committee (2000-2002).
- *Member*, Deans Advisory Committee (2000-2001).
- *Co-Host*, Delaware Vegetable Growers Trip to the Tulare Farm Show (w/ Ed Kee). (1999).
- *Member*, College Committee on Nutrient Management. (1998).
- *Member*, College Strategic Planning Committee (1997-98).

#### COLLEGE OF ENGINEERING SERVICE

- *Member*, Center for Composites Materials Honors Day Awards Committee (2004, 2007)
- *Member*, Search Committee - Master Machinist for the Student Shop. (2003).
- *Moderator*, Center for Composites Spring and Summer Research Symposiums (Fall, 2003, Spring, 2004, Spring 2005, Spring 2007, Spring 2008)
- *Faculty Coordinator*, Renovations of the Student Shop and Student Shop Website (2001-2004).

#### DEPARTMENT OF BIORESOURCES ENGINEERING SERVICE

- *Member*, Promotion and Tenure Committee. (2007-08)
- *Chair*, Promotion and Tenure Committee. (2006-07)
- *Presenter*, RISE Program Presentation to High School Students. (Fall 2003, Spring 2004)
- *Member*, Department Promotion and Tenure Committee. (2001-02).
- *Member*, Search Committee for Assistant Professor/Extension in Irrigation/Water Resources Engineering (2000-01).
- *Member*, Search Committee for Assistant Professor/Extension Specialist in Poultry Production Engineering (2000-01).
- *Member*, Search Committee for Assistant Professor in Power and Machinery, Bioresources Engineering (2000).
- *Member*, Search Committee for Engineering Extension Associate. (1999).

#### DEPARTMENT OF MECHANICAL ENGINEERING SERVICE

- *Member*, Design Curriculum Committee. (2005).
- *Member*, Laboratory and Safety Committee. (2000- present).
- *Advisor*, Student Chapter of SAE. (2000-01).

- *Member*, Graduate Student Recruitment Committee. (1999-00).